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ANNUAL ORATION

BEFORE THE ALUMNI ASSOCIATION OF THE MEDICO-
CHIRURGICAL COLLEGE OF PHILADELPHIA, 1888.

"Our Alumnus and his Medical Environment."

—BY—

JOHN B. HAMILTON, M.D.,

Surgeon-General of the Marine Hospital Service of the United States ; Professor of Surgery, Georgetown University, Washington, D. C., etc.



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M R. PRESIDENT, LADIES, AND GENTLE-
MEN: I need scarcely say to you that I am
deeply grateful for the honors conferred upon me by
this college—a school which, blessed with youth and
energy, bore such an honorable part in the greatest
gathering of medical men yet held on this continent.

Its professors devoted themselves to the patriotic
duty of making our guests respect and admire this
land we love so well, its people and its institutions; and
while I am in no sense an orator, such as were those
who have preceded me, I felt that I could not fail to re-
spond to your call, if it were for nothing more than to
express the general sentiment of gratitude to your
honorable faculty, deeply felt by those connected with
the organization and labors of the late International
Medical Congress.

I do not suspect, Mr. President, that in your choice
of speaker on this occasion you were influenced by
personal considerations, but rather by your desire to
compliment that larger body of medical men outside
the walls of your college, and your city, who worked
faithfully and earnestly to ensure the brilliant suc-
cess of that great International Congress.

There is a tendency to deprecate medical science
among those not very familiar with it, and to claim that
it is not progressive as are other sciences; and this un-
progressiveness is alleged as especially true of Ameri-
can physicians. Some of our ablest writers in har-
mony with this sentiment begin with an apology,
notwithstanding the flattering dictum of Burton, who
said that of the three professions, the clergy had the
most honor, the lawyers the most money, and the
physicians the most learning.

Perhaps the modesty (not to say meekness) with which our new and unregenerate countrymen should be stocked, would lead us to say with the French historian, "that it is better to have a future than a past," but yet that we may be *en rapport* with the present, it is necessary to take a retrospective glance.

What a change has taken place in this city of Philadelphia, and in our country, since John Morgan and William Shippen founded the Medical Department of the University and began their lectures! To show the state of American medicine, then, we have only to let Dr. Morgan tell the story:

"We may congratulate ourselves,"¹ he says, "that in this and some of the larger neighboring towns we have a number of skilful physicians and expert surgeons, qualified by genius, education, and experience, to take charge of the health of their fellow-creatures. Under these, it is the custom of medical students to enter as apprentices, in order to learn their practice and get an acquaintance with their profession. This, it must be allowed, is a great advantage, but if we add to it a casual conversation, sometimes with the most able masters whom they can have access to consult—an intercourse with one another, and a reciprocal communication of sentiment and observation, together with reading what authors they can procure on the various subjects of which this science treats—these make the sum total of the best medical education in America.

"Never yet has there offered a coalition of able men who would undertake to give complete and regular courses of lectures on the different branches of medicine.

. . . Young men who are limited to the present opportunities of improvement in America cannot enter upon the stage of action but with unfavorable prospects, and they must unavoidably be in continual perplexities."

Notwithstanding this gloomy view of the state of medical education as applied to the city of Philadelphia, Dr. Morgan drew a darker one of the condition of the medical men in the country:

"Let us now turn our views to the growing state

¹ "A Discourse upon the Institution of Medical Schools in America," by John Morgan, M.D., Philadelphia, 1765.

of this and the neighboring colonies ; let us reflect on the great number of inhabitants scattered through such an extensive tract of country who are destitute of all the aids of medical science.

" Let us consider, further, that in many large towns and villages there are a number of persons entrusted with the practice of medicine and surgery who, being destitute of all means of acquiring the true principles of their profession, remain in a pitiful state of ignorance in it, without any prospect or opportunity of correcting their errors or greatly improving their knowledge. We cannot, then, remain untouched with sentiments of compassion ; we cannot avoid feeling a part of their distress, or forbear to wish that a remedy were found for so great a misfortune."

Dr. Morgan lamented the fact that young men must go abroad to attend medical lectures, and modestly hoped that he " might see, in some years, a number of gentlemen, natives of America, qualified to fill the most difficult and important parts of their profession with usefulness and applause." He also hoped that the medical instruction, " though small in its beginning, may receive a constant increase of strength, and annually exert a new vigor. It may collect a number of young persons of more than ordinary abilities, and so improve their knowledge as to spread its reputation to distant parts. By sending these abroad, duly qualified, or by exciting an emulation amongst men of parts and literature, it may give birth to other useful institutions of a similar nature, or occasional rise by its examples to numerous societies of different kinds, calculated to spread the light of knowledge through the whole American continent, wherever inhabited." Such was the statement of the existing condition in colonial times, and such were the hopes of the founder of the earliest medical school in America, and, if we look about us to-day, we see that medical education has reached a plane among us not dreamed of in the days of Morgan and Shippen.

The medical journal, that most valuable product of the century, brings the literary treasures of the old and the new world to our libraries, and the medical colleges in this country are now like the " little

church around the corner"—they are ubiquitous. Indeed, there is sometimes a guarded statement made to the effect that there are even too many of them, that it is possible to have too much of this very good thing ; and I have heard of late some earnest remarks from gentlemen connected with medical schools, where clinical material abounds, to the effect that there ought to be no medical colleges in towns too small to furnish a general hospital. That this view is not generally regarded with popular favor, is shown by the fact that there are at the present time 127 medical schools in the United States, twenty-seven of which require three years' attendance upon lectures as preliminary to graduation. Some of these alleged schools have little more than a paper existence, but most all of them do some good in their way, and one would rather take his chances of treatment at the hands of the humblest alumnus of almost any of them than to be treated according to the routine of Radcliff, Mead, or Sydenham. Still, the most enthusiastic medical optimist must feel a pang of pity when he sees an announcement of a medical college wherein not a single "professor" has access to a hospital, and where the only "long-felt want," that has been filled by the establishment of the new college, is the void in the breasts of the professors.

There are colleges specially devoted to the teaching of medical eccentricities, which is not astonishing when we reflect on the remarkable history of the spread of Thomsonianism, Perkinism, and Hahnemannism. There are at present in the United States about 7000 practitioners of "homœopathy," some of whom are true believers in the Hahnemannic moonshine, and there are *eleven* schools ostensibly engaged in the dissemination of that unspeakable nonsense. There are *nine* schools, so-called "eclectics," the lineal descendants of the Thompsonian "root and herb doctors," and *three* schools teaching "physio-medicine," whatever that is ; and it is doubtless only a question of time when we may have a University devoted to that newest craze yclept "Christian science." This, the veriest mid-summer madness of all, is now growing at the usual rate of progress of a mild pandemic, and its lesson teaches the medical

man, as Hamlet taught Ophelia, that "be thou chaste as ice and pure as snow, thou shalt not escape calumny." In every age of the world, quacks of one or another sort have flourished, and no matter how skilful the average practitioner may become, it is quite probable, as the human mind is constituted, there will be charlatans, and food for their fattening, even to the end of time.

However, much has been done to advance the work of scientific medical education, and when so many of the older schools declined to lengthen their terms and to adopt the three-years course, then the starting of new schools, on the basis of a three-years college course, forced many of them into line, and in this direction your own college has borne a prominent and honorable part. Some of the colleges are still lagging behind in the march of progress, and some, having tried it, were forced to return to the two-year method; but the signs of the times point to the fact that it will be but a short time until no practitioner of medicine will send a pupil to a school where he may be graduated in two years. There are at present but twenty-seven schools where three annual courses of lectures are required as preliminary to graduation. Notwithstanding the admitted fact that there is yet much to be done to put the average of the medical schools on the highest plane, yet the general progress of medical science in this country has fairly kept pace with the sister sciences at home and medical science in Europe. One of the most tangible evidences of the great advantage to the world that has resulted from the general increase of medical knowledge, is clearly shown by the increased longevity accorded to our times.

The recent investigations conducted by Prof. Humphrey, of Cambridge, on the conditions, habits, and family history of centenarians is very interesting. After mentioning the fact of the recent celebration of the one-hundredth birthday of the celebrated French savant Chevreuil, who, the same night, occupied the President's box at the opera; and that "a Chinese centenarian recently passed the examination which qualified him to enter the highest academy of mandarins," he summarizes the average centenarian's qualities as "precisely those which might have been

anticipated, namely, a good family history; a well-made frame of average stature, spare rather than robust, with good health; little troubled with ailments of any kind, with good digestion; regular daily action of the bowels; active; capable of much exertion, with the restorative advantages of good, sound sleep, permitting or inducing early rising; good vocal organs; a good appetite moderately indulged, with little need of, and little consumption of, alcohol or animal foods; an energetic yet placid temperament; a good intelligence; the hair holding its ground and its color well; the organs of sight and hearing performing their functions well and long. Our centenarians afford, in short, good examples through life of the *mens sana in corpore sano.*" Prof. Humphrey concludes that while there is no royal road to the centenary period of life, "we see that it is attained under a variety of conditions, and that few persons can be said to be excluded from the prospect of it."

The biblical limit of three-score and ten, then, is gradually ceasing to be the limit, and the average age of mankind, always painfully near the beginning, has perceptibly lengthened in our day, owing, I think, to the better average knowledge of the causes of disease, the means to avoid it, and to the stamping out of epidemics. This knowledge must come originally from the medical profession, and when the Medico-Chirurgical College gives a diploma to our outgoing practitioner, in this year of our Lord 1888, she certifies to a much higher grade of qualifications than would have been the case even a decade ago. She has taught her missionary son more on the subject of the prevention of disease than would have been possible or necessary a few years ago, for, unfortunately, the dangers to human life increase with equal pace with higher general knowledge and increased technical skill. Chemistry has opened new territory almost boundless, by which it is seen that our food and drink are poisoned with hitherto unknown compounds.

The progress of the mechanical arts greatly increases the dangers to human life, by the increased speed of travel, by the development of the knowledge of electricity, by engineering work under the earth, where men are placed under an air-pump, as in a caisson, a

deep mine, or in a tunnel, and by new explosives which may bowl one out of existence so quickly that a second seems, by comparison, dateless as eternity.

To meet these new and ever-increasing dangers, preventive medicine, the newest branch of medical science, is bravely coming on, and it is more than probable that these now present terrors will be rendered as harmless in the future as many calamities of the past have been rendered harmless by the ceaseless progress of the age.

There is no shadow of doubt remaining that cholera and yellow fever may be exterminated, not by inoculation or vaccination, but by cleanliness, which includes germ destruction and careful exclusion of fomites. It will be a glorious day for the human race when inspection officers find all ships entering their harbors are absolutely clean, and that they have sailed from a clean port. Then the great outlet to human life by pandemics will be estopped; and the day is not distant when the nation that sends ships to the shores of a friendly nation, loaded with yellow fever or cholera, will be held to as rigid account as if a ship of war had committed any other act of hostility.

This leads me to remark that the business of the sanitarian of to-day demands something more than to wage a war of extermination against the unfortunate microbe, and you are happy, Alumni, in being sent out in an age when medical institutions seek to make experimental research the corner-stone of the medical superstructure. It is in our day that the food-poisons have been discovered, such as tyrotoxicon and the deadly ptomaines, and if chemistry has pointed out these deadly agencies, she has not infrequently kindly supplied the knowledge to avoid them or to counteract their effects. It may well be, now and then, that some of the new discoveries in physical science have not a single redeeming feature, but they are to be received and treated as Milton has so clearly worded it in regard to new books: "A book," he says, "should be as freely admitted to the world as any other birth; and if it prove a monster, who denies but that it may justly be burnt or sunk in the sea."

The sanitarian of to-day utilizes all the knowledge brought him by the special branches of medicine;

there are few but teach him some important lesson in life-saving. The chemist, the properties of human environment, the effect of adulterants in air, in water, in food; the dangers of heating apparatuses, and the effects of illuminating agents. The pathologist teaches him the changes in human structure. The bacteriologist teaches him the causes of many diseases hitherto obscure or entirely unknown; he teaches him the means of propagation and development of the pathogenic germs. The surgeon regales him with disquisitions on preventible accidents, the diseases of overcrowding, and of camp-life. The obstetrician may, if he choose, tell the health-officer many a tale of sin and suffering due primarily to bad hygienic conditions, and even the chiropodist may inform the sanitary authority that the human foot is almost the worst-abused of the members; and if we go beyond the pale of the medical profession for information, we find that the tales of woe unfolded to the ear of the health-officer are indeed without end. And we may say that the business of the sanitarian is peculiar to our own times. It is true that the study of hygiene has been carried on from the earliest times, but it was by the dilettante, the lotus-eaters of the past. No such thought as that of public hygiene seems to have crossed the path of the ancient philosophers.

Some of the ancients, and in more modern times Cornaro and Sanctorius, studied it with a view only of personal longevity. Conaro, who may be said to have been the original model on which Dr. Tanner in our day followed, actually prolonged his life to the age of one hundred and nine years by the most abstemious diet. Conaro was a young Venetian nobleman, who had greatly impaired his health by intemperance and riotous living; but, being deprived of his estate and dignities, he left Venice and retired to Padua, at the age of forty, and then commenced, by the advice of his physicians, his regular habits of living, with the intention of attaining a very old age. His treatise "On a Sober Life," written at the age of eighty-three, he reissued twice, once at the age of eighty-six, and again when he was ninety-five. He sustained himself up to the age of seventy-seven by eating twelve ounces of solids and drinking four-

teen ounces of wine each day; but at that period, being thrown out of a coach, and having sustained two dislocations and many severe bruises, he was induced to increase the quantity. He then took fourteen ounces of solid food and sixteen ounces of wine each day. This increase, however, he complained made him so severely sick that he resumed his former allowance; but, after the age of ninety, he was not able to drink wine during the hot months of July and August.

Sanctorius, indeed, in his "Medicina Statica," laid down elaborate rules for increasing personal longevity. He it was who, while a professor of physic at Padua, invented that celebrated weighing-chair, by which he proposed to regulate his diet. He claimed to have discovered the exact amount of daily loss to the body by what he termed the insensible perspiration, and the sum of this loss, together with that from the more prominent emunctories, he proposed to supply. His chair was placed in front of his table, and was attached by a long rod to a pair of steel-yards in a chamber above; a spiral spring was placed in each of the four posts of the chair, in which while eating he seated himself; when the quantity of food ingested reached the required weight, the posts overcame the springs and descended to the floor, whereupon the professor, being warned by this, immediately left off eating and arose from the table. It is somewhat dampening to the ardor of any desirous of repeating Sanctorious' method, to know that, notwithstanding his cares, he died at the comparatively early age of seventy-five; but our good people, about all such matters, are apt to say with the poet:

Preach not to me your musty rules,
Ye drones that mould in idle cell;
The heart is wiser than the schools;
The senses always reason well.

The idea of prolonging the lives of a whole nation, by proper sanitary regulations, is a modern one; nor is this statement invalidated by the reputed longevity of individuals among the ancients. It is easy to show that the general average duration of life among the ancients was much less than now. I examined,

within a few days, the mortality statistics of Baltimore and the District of Columbia for the last decade, and was surprised to find evidence of an increased longevity even in that short space of time. I find that, in Baltimore, there were 513 persons died in the year 1877 who were over seventy years of age, out of a total of 7936 deaths, while in the year 1887 there were 842 decedents over seventy, out of a total number of deaths of 8372, the respective percentages being .064 and .10. The change in Washington is scarcely less striking. Thus, there were 415 decedents over seventy in 1877, out of a total number of deaths of 4103; and in 1887 there were 517 decedents over seventy, out of a total number of deaths of 3974, the respective percentages being .10 and .13.

DISTRICT OF COLUMBIA.

Year (Fiscal).	Total deaths.	Seventy and over.	Per cent.
1874	2610	209	.08
1875			
1876			
1877	4103	415	.10
1878 (9 mo.)	2683	252	.09
1879	3810	339	.08
1880	1406	372	.26
1881	1583	423	.26
1882	1637	494	.30
1883	1455	473	.32
1884	3643	443	.12
1885	2888	552	.19
1886	3974	517	.13

BALTIMORE, MARYLAND.

Year (Calendar).	Total deaths.	Seventy and over.	Per cent.
1877	7936	513	.064
1878	6733	583	.086
1879	7618	689	.090
1880	8043	670	.083
1881	8816	706	.080
1882	8923	781	.087
1883	9380	732	.078
1884	8293	777	.093
1885	8153	821	.10
1886	8339	732	.087
1887	8372	842	.10

The full statement by years is inserted for the information of the curious. It will be seen there is some variation, but the general tendency is clear.

It is no longer possible for an epidemic to cause the same widespread ravages as during the Middle Ages, when astrology was supposed to afford the key to their spread, for the doctrine of cleanliness is known of all men who read ; and in the active governments of Europe, and in our own, public sentiment upholds the most despotic enforcement of sanitary regulations, and it may be safely stated that, in those countries where practical hygiene is at its lowest ebb, there the government itself is in decay.

Of course, I cannot here refer to that outrageous cholera-breeding spot, India, for it is only comparatively recently that the English have come into possession of that country ; and while sanitary works are constantly going on and steady improvement made, yet the native inertia persistently resists the attempts to purify their surroundings. The establishment of medical colleges at Calcutta, Bombay, and Shanghai, under English auspices, and the American medical college at Beyrût, will do more towards the destruction of oriental epidemics, by educating native physicians, than reams of sanitary laws that cannot be enforced ; and thus we return to the place of beginning —our medical schools—as the initial point for the promulgation of measures for the physical improvement of our race, and that the well-educated medical man of our times is a credit to his school and a blessing to his country ; but, while we glorify our own age, we must reflect that posterity will judge us very much as we have judged our predecessors, which fact should make us tender with the reputations of the physicians of the past, for at the worst they acted up to the light they had, but in many cases there has been no change in principles ; and, as to the constant struggle for truth and knowledge, the seniors sought it as assiduously as the moderns, and in this direction thoughts, like the elements of matter, are indestructible. The Marian Oak has long since crumbled to Mother Earth, but its story on the printed page gives it a longer lease of life than nature alone can give a plant, albeit in another form ; and although the voice of Dr. Morgan, pleading for higher medical education, has long been hushed in the silence of the grave, yet his thoughts, embalmed by the magic types, are as eloquently

pleading for advancement now as when originally uttered; and those of us outside of Philadelphia, familiar with its history and its boundless hospitality, when thinking of this wonderful city and its glorious past, feel like exclaiming :

" Long live Philadelphia, the birthplace of the American Constitution ; the Stars and Stripes ! The city hallowed by the Continental Congress ! The home of Franklin, the American philosopher !

" Long may this great city be revered in the hearts of the medical men of this country, as the city of Morgan and Shippen, Physick and Rush, Gibson and Dewees, Hodge and Meigs, Mütter and Pan-coast, Chapman and Dunglison, Wood and Gross, and all that galaxy of distinguished men who have made American medicine famous throughout the world, while medical literature shall endure."

